

CLAIM AMENDMENTS

This listing of claims will replace all prior versions and listings of claims in the application.

1. (Currently Amended) ~~Receiver (1,11)~~ A receiver comprising:
 2. a receiving stage (2,12) for receiving ~~that receives~~ frequency signals;
 3. a mixing stage (3,13) coupled to the receiving stage (2,12) for generating ~~that~~ converted frequency signals;
 4. a modulating stage (4,14) coupled to the mixing stage (3,13) for ~~that~~ delta-sigma modulating ~~modulates~~ the converted frequency signals; and
 5. a filtering stage (5,15) coupled to the modulating stage (4,14) for filtering ~~that~~ filters the delta-sigma modulated converted frequency signals, wherein the filtering stage comprises a decimator receiving an output signal from a time-control loop having a loop quantizer and a loop filter.
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2. (Currently Amended) ~~Receiver (1,11) as defined by The receiver of claim 1,~~ wherein the modulating stage (4,14) comprises:
 3. a delta-sigma modulator (41,42,43,90) comprising:
 4. a low-pass filter (91);
 5. a quantiser (92)-quantizer coupled to the low-pass filter (91); and
 6. a digital-to-analog converter (93) for feeding ~~that~~ feeds back an output of the quantiser (92)-quantizer to an input of the low-pass filter (91).

1 3. (Currently Amended) Receiver (1,11) as defined by The receiver of claim 2,
2 wherein the low-pass filter (91) comprises a time-continuous filter.

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1 4. (Currently Amended) Receiver (1,11) as defined by The receiver of claim 1,
2 further comprising:

3 a further mixing stage (6,16) coupled to the filtering stage (5,15) for
4 generating that generates baseband signals; and

5 a further filtering stage (7,17) coupled to the further mixing stage (6,16) for
6 that performs channel selective filtering of the baseband signals.

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1 5. (Currently Amended) Receiver (1) as defined by The receiver of claim 1,
2 wherein the mixing stage (3) comprises a mixer (32), and the modulating stage
3 comprises a delta-sigma modulator (41).

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1 6. (Currently Amended) Receiver (11) as defined by The receiver of claim 1,
2 wherein the mixing stage (13) comprises:

3 a first mixer (34) for generating that generates in-phase signals and

4 a second mixer (35) for generating that generates quadrature signals, and

5 the modulating stage (14) comprises:

6 a first delta-sigma modulator (42) for that delta-sigma modulating
7 modulates the in-phase signals, and

8 a second delta-sigma modulator (43) for that delta-sigma modulating
9 modulates the quadrature signals.

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2 7. (Currently Amended) System (100) A system comprising:
3 a transmitter (101) and
4 comprising a receiver (1,11) which comprises:
5 a receiving stage (2,12) for receiving that receives frequency signals;
6 a mixing stage (3,13) coupled to the receiving stage (2,12) for
7 generating that generates converted frequency signals;
8 a modulating stage (4,14) coupled to the mixing stage (3,13) for that
9 delta-sigma modulating modulates the converted frequency signals; and
10 a filtering stage (5,15) coupled to the modulating stage (4,14) for
11 filtering that filters the delta-sigma modulated converted frequency signals,
12 wherein the filtering stage comprises a decimator receiving an output signal
 from a time-control loop having a loop quantizer and a loop filter.

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2 8. (Currently Amended) Modulating/filtering—A modulating/filtering stage
3 (10,20) for use in a receiver (1,11) comprising:
4 a receiving stage (2,12) for receiving that receives frequency signals;
5 a mixing stage (3,13) coupled to the receiving stage (2,12) for generating that
6 generates converted frequency signals;
7 the modulating/filtering stage (10,20) comprising

7 a modulating stage (4,14) coupled to the mixing stage (3,13) for that delta-
8 sigma modulating-modulates the converted frequency signals; and

9 a filtering stage (5,15) coupled to the modulating stage (4,14) for filtering that
10 filters the delta-sigma modulated converted frequency signals, wherein the filtering
11 stage comprises a decimator receiving an output signal from a time-control loop
12 having a loop quantizer and a loop filter.

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1 9. (Currently Amended) Method-A method for receiving frequency signals and
2 comprising: the steps of

3 generating converted frequency signals;

4 delta-sigma modulating the converted frequency signals; and

5 filtering the delta-sigma modulated converted frequency signals, wherein the
6 filtering uses a decimator receiving an output signal from a time-control loop having
7 a loop quantizer and a loop filter.

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1 10. (Canceled)

1 11. (New) The receiver of claim 1, wherein the loop filter further comprises:

2 an adder that combines a detected signal with a feedback signal, thereby
3 producing a sum;

4 an inverse z block that receives the sum and produces the feedback signal;
5 and

6 a gain block that processes the feedback signal to produce the output signal
7 that is sent to the loop quantizer to control the decimator.